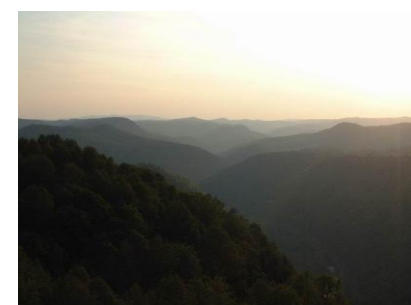
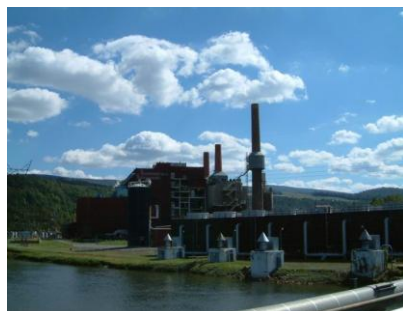


National Emission Inventory Program Update



Department of Environmental Protection Division of Air Quality

Presented for

West Virginia Manufacturers Association
West Virginia Chamber of Commerce

West Virginia Oil and Natural Gas Association

May 11, 2009



National EI Program Update OVERVIEW

- National Emissions Inventory
- Air Emissions Reporting Rule (AERR)
- Emissions Inventory System (EIS)
- Consolidated Emissions Reporting Schema (CERS)
- State & Local Emissions Inventory System



What Is the National Emissions Inventory?

- The National Emissions Inventory (NEI) is EPA's compilation of estimates of air pollutants discharged on an annual basis and their sources.
 - It includes emissions estimates submitted by State, Local and Tribal air pollution control agencies, estimates calculated by EPA, and emissions obtained from other sources.



What Is the National Emissions Inventory? (Continued)

- EPA uses the NEI to
 - track emissions trends over time,
 - develop regional pollutant reduction strategies,
 - set and analyze regulations,
 - perform air toxics risk assessments including inhalation risks and multi-pathway exposure,
 - model air pollutant dispersion and deposition, and measure environmental performance as required by the Government Performance and Results Act.



NEI Business Process Reengineering

- The NEI business process has been reengineered for the 2008 emissions inventory cycle, which will use data collected for the year ***2008 and will be published in 2010.***
- The focus of the reengineering effort was to identify ways to make the process for developing the NEI more efficient and to ***develop a new data system to create the NEI.***



AERR: Why Was it Developed?

- ***Finalized December, 2008***
- Previous emissions reporting requirements were located in several areas of the Code of Federal Regulations (CFR)
- The Consolidated Emissions Reporting Rule (CERR) initiated the process of organizing and simplifying emissions reporting requirements
- The AERR continued to organize and simplify emissions reporting requirement by:
 - ***Harmonizing CERR and NOx SIP Call*** reporting requirements
 - Deleting, adding and revising data elements to update reporting requirements.



AERR: Reporting Changes

- The AERR requires emissions to be ***reported within 12 months*** from the end of the inventory year ***rather than 17 months*** under the CERR
- Implementation ***begins with the 2009 inventory***
- Particulate Matter
 - PM primary (sum of filterable and condensible components) must be reported as under the CERR
 - Reporting of the ***filterable and condensible*** components is a ***new requirement***
 - EPA added the component reporting requirement to help them understand what was being reported as PM primary

What Is the Emissions Inventory System (EIS)?

- The EIS is EPA's new information system for storing all current and historical emissions inventory data.
- It will be used to receive and store emissions data and generate NEIs beginning with the 2008 NEI.
- The EIS will use the Consolidated Emission Reporting Schema (CERS) for reporting of data from the state, local and tribal agencies.



Consolidated Emission Reporting Schema (CERS)

- The objective was to develop a common emissions reporting schema that could be used for sharing and reporting air pollution emissions data in the U.S.
- In particular, the schema is designed to *support the reporting of criteria and air toxic emissions, as well as GHGs.*



Consolidated Emission Reporting Schema (Continued)

- The resulting benefits include greater efficiencies for States and industry reporters submitting to multiple programs, clearer and consistent requirements across these programs.
- The CERS itself is not a data flow. It is a set of XML schemas that may be used for several different data flows



State and Local Emissions Inventory System

- There were about 17 State and Local Agencies that used i-STEPS for at least emissions inventory development.
- About 10 – 12 still do to varying degrees.
- MACTEC, the developer of i-STEPS, determined it could no longer continue to support the software effectively because it is incompatible with the CERS.



State and Local Emissions Inventory System (Continued)

- EPA recognized that reengineering the NEI into the new EIS/CERS formats would place a burden on State/Local agencies.
- Therefore they proposed to offer grants through their Exchange Network to help the agencies to maintain and improve the data flow to EPA:
 - \$300,000 for single agencies; and
 - \$500,000 for consortia of agencies



State and Local Emissions Inventory System Grant Application

- At the 2008 Emissions Inventory Conference State and Local agencies met to discuss their options
 - The agencies decided to form a consortium to apply for the \$500,000 grant
 - The grant application effort was led by the Arkansas Department of Environmental Quality, with significant input from WV DEP



State and Local Emissions Inventory System Grant Application (Continued)

- Consortium member agencies include:
 - Allegheny County (PA) Health Department
 - Arkansas DEQ
 - Arizona DEQ
 - Delaware Division of Air & Waste Management
 - Nashville (TN) Pollution Control Division
 - New Hampshire Division of Environmental Services
 - Philadelphia (PA) Air management Services
 - West Virginia DEP



State and Local Emissions Inventory System Grant Application (Continued)

- Consortium member agencies held frequent conference calls throughout the summer and fall of 2008
 - The application was submitted by AR in November, 2008; and
 - EPA's Exchange Network gave preliminary approval to the application at the end of March, 2009
 - The money will be provided to the AR DEQ to administer in August, 2009



State and Local Emissions Inventory System Needs Analysis

- During the fall, 2008 the consortium developed an extensive needs analysis (Strawman)
- It had to meet EPA requirements
 - Basic CERS structure
 - Report in XML
 - GHG reporting compliant
 - CROMERR compliant
 - Cross-Media Electronic Reporting Regulation



State and Local Emissions Inventory System Needs Analysis (Continued)

- It also had to meet the needs of the Consortium agencies
 - We own the software!
 - The basic system must meet minimum collection, data management, and reporting requirements of Consortium Agencies
 - Web-based
 - CROMERR-compliant
 - Must be acceptable to the regulated community



State and Local Emissions Inventory System Needs Analysis (Continued)

- Additional high-priority Consortium criteria
 - Built-in error checking, (bounds, ranges)
 - System will perform calculations based on AP-42 or allow source-specific inputs
 - Allow formulas, not just EFs
 - Can attach spreadsheets, text files, word documents, pdfs, and jpeg documents.
 - Import data from legacy system (i-STEPS)
 - System will provide for multiple users for a single source or a single user for multiple sources.



State and Local Emissions Inventory System Needs Analysis (Continued)

- We also brought in the IT staff from the member agencies to make sure that the technical stuff made sense. For example
 - no dynamic SQL should be used in the web application to prevent SQL injection attacks
 - SQL coding must be done using ANSI-standard SQL – no specialized database functions allowed



State and Local Emissions Inventory System

Next Steps

- Arkansas DEQ is drafting RFP with input from the other agencies
- When the money is awarded by the Exchange Network in August we will post the RFP
- We plan to select the contractor by fall, 2009
- The system should be ready for final installation at agency sites and testing by fall, 2010



State and Local Emissions Inventory System

Next Steps - Continued

- **Maine's new EI system is interesting**
 - Maine started with an i-STEPS system
 - Their new system was developed by the same contractor that developed EPA's EIS and CERS
 - Maine's system was paid for with another EPA Exchange Network grant in 2006
 - Software NOT proprietary
 - Same software would be available to Consortium agencies

